Work Order ID 138173

Tuesday, October 27, 2015 11:05:10 AM

138173

Item ID: D412-742-013 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible **Stop** *NS2*

Start Date: 10/19/2015 **Start Qty:** 1.00 *1*

Required Date: 10/29/2015 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** MLJ **Date:** OCT 2 7 2015 **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Draw Nbr	Revision Nbr
IIN D412-742	E

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	Document Control	0.00							
100	DOCUMENT CONTROL					DAS 27 9-89			
DC	**Memo**	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile and create labels per PPP D412-742-013	CHG0078	per ECN 16-504 MK 12-1-15			FEB 10 2016			
110	Pick Kit	0.00							
110						DAS 6 9-89		DEC 23 2015	
Packaging	**Memo**	0.00							
Packaging						DAS 28 9-89			
120	QC4- 100% Inspect kits for completeness	0.00							
120						Shp 10/14/15			
QC	**Memo**	0.00							
Quality Control									

B138787

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verfication	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID 138173

Tuesday, October 27, 2015 11:05:10 AM

138173

Item ID: D412-742-013 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible **Stop** *NS2*

Start Date: 10/19/2015 **Start Qty:** 1.00 *1*

Required Date: 10/29/2015 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging						DAS 28	BAG 27	MAR 0 1 2016
Packaging	**Memo**	0.00				1	9-29	9-29	
Packaging	Identify and pack for shipping as per PPP D412-742-013 Location: F673								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	**Memo**	0.00				MCJ		MAR 0 1 2016	
Quality Control									

MCJ MAR 0 1 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verification
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Picklist Print

Tuesday, October 27, 2015 11:05:09 AM

14

Work Order ID: 138173 *138173*

Parent Item: D412-742-013 *D412-742-013*

Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev: A05.10.13New Issue KJ/JLM
IPP Rev:B 06-06-08 As per DSI9336 JLM IPP RevC
07-12-03 ECN 1072 DD verified by:JLM
IPP Rev:D 08-09-08 ecn 08-510 DD verified by:EC
IPP Rev:E 09-01-23 as per DSI9441 DD verified by:EC IPP RevF: add AN4C7A DD 10.01.13 verified by:EC IPP Rev:G 11.11.01 as per DSI9517 REV.B DD verified by:EC IPP rev:H 12.01.12 PER IIN REV.E DD VERF: IPP Rev:I add AN4C47A DD 12.03.14 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4C47A *AN4C47A* Bolt		Purchased	No			110	Each	36.0000	4 **	4			DAS 6 9-89
				Location		**Loc Qty**		**Loc Code**				DAS 28 9-89	
				FG		10							
					122491	10							
DAS 27 9-89				ST312A		20							
					m132879	20				2			
				ST341		6							
					m132795	6				2			
D412-742-043 *D412-742-043* Repl. Skidtube Fits LH or RH, High Gear, DART (Apical) Tri-Bag Float Comp.		Manufactured	No			110	Each	0.0000	1 **	1 138787		DAS 6 9-89	DAS 28 9-89
D2571 *D2571* Saddle, Fwd, Out		Manufactured	No			110	Each	6.0000	1 **	1 135832			
				Location		**Loc Qty**		**Loc Code**				DAS 6 9-89	DAS 28 9-89
DAS 27 9-89				ST397		2							
					135925	2							
				ST405		4						JAN 7 5	
					119178	4							

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	
		Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verification	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*

Parent Item: D412-742-013 *D412-742-013*

Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015

Start Qty: 1.00 **Required Qty:** 1.00

D2572 Manufactured No 110 Each 13.0000 1 1

D2572

Saddle, Fwd, In

DAS 27 9-89

Location	Loc Qty	Loc Code
ST397	9	
131069	1	
135926	8	
ST405	4	
119179	4	

**

137748

DAS 6 9-89

DAS

9

D2573 Manufactured No 110 Each 5.0000 1 1

D2573

Saddle, Aft, Out

DAS 27 9-89

Location	Loc Qty	Loc Code
ST398	1	
135927	1	
ST405	4	
119180	4	

**

138439

DAS 6 9-89

FEB 04 2016

DAS 28 9-89

D2574 Manufactured No 110 Each 12.0000 1 1

D2574

Saddle, Aft, In

DAS 27 9-89

Location	Loc Qty	Loc Code
ST398	8	
135928	8	
ST405	4	
119181	4	

**

140026

DAS 6 9-89

DAS 28 9-89

D2876 Manufactured No 110 Each 5.0000 2 2

D2876

Saddle Spacer

DAS 27 9-89

Location	Loc Qty	Loc Code
ST013	5	
135443	5	

**

138251

JAN 05 2016

DAS 28 9-89

DAS 6 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐
Large Fab	☐	Composite	☐	Supplier	☐

Engineering	☐		
Quality	☐		
Other	☐		
	☐		

Date :

Step #:

QTY Effective :

MRB (QSI042) Approval

Description Work Order Deviation

Disposition

Completed By

Lead hand / Supervisor Approval Verification

QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

D2877 *D2877*
Saddle Spacer

Manufactured	No		110	Each	4.0000	2 **	2

DAS 27 9-89

D3403-1 *D3403-1*
Bushing

Manufactured	No		110	Each	23.0000	8 **	8

Location	Loc Qty	Loc Code
ST025A	4	
128495	4	

DAS 6 9-89 DAS 28 9-89

DAS 27 9-89

D3403-5 *D3403-5*
Bushing

Manufactured	No		110	Each	11.0000	8 **	8

Location	Loc Qty	Loc Code
ST034	16	
134645	8	
135435	8	
ST037	7	
129784	7	

DAS 6 9-89 DAS 28 9-89

8 137229

DAS 27 9-89

D2747 *D2747*
Set Screw

Manufactured	No		110	Each	120.0000	4 **	4

Location	Loc Qty	Loc Code
ST035	11	
133154	1	
135522	10	

DAS 6 9-89 DAS 28 9-89

DAS 27 9-89

Location	Loc Qty	Loc Code
ST010	20	
134779	20	
ST012a	100	
131867	50	
136566	50	

DAS 6 JAN 05 2016 9-89 DAS 28 9-89

4

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

D3533-1 Manufactured No 110 Each 80.0000 2 2
D3533-1
Set Screw

DAS 27 9-89

Location	Loc Qty	Loc Code
ST041	24	
134778	24	
ST048	6	
128448	6	
ST051A	50	
136509	50	

JAN 0 5 2016
DAS 6 9-89
DAS 28 9-89

AN4C6A Purchased No 110 Each 213.0000 16 16
AN4C6A
Bolt

DAS 27 9-89

Location	Loc Qty	Loc Code
FG	14	
103344	4	
121657	10	
ST345	199	
m131410	3	
m132853	15	
m132930	181	

DAS 28 9-89

AN4C53A Purchased No 110 Each 74.0000 4 4
AN4C53A
BOLT

DAS 27 9-89

Location	Loc Qty	Loc Code
ST312A	50	
m132795	50	
ST340	24	
m132879	24	

DAS 28 9-89
DAS 6 9-89
DEC 2 3 2015

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
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Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
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☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

AN4C52A	Purchased	No		110	Each	73.0000	4	4

AN4C52A
Bolt

DAS 6 9-89 DAS 28 9-89

Location	Loc Qty	Loc Code
FG	5	
122518	5	
ST312A	30	
M132169	0	
M133091	15	
M133336	15	
ST340	38	
M132169	11	
M132381	9	
M132522	3	
M132674	15	

DAS 27 9-89

AN6C12A	Purchased	No		110	Each	54.0000	8	8

AN6C12A
Bolt

DAS 6 9-89 DAS 28 9-89

Location	Loc Qty	Loc Code
ST286A	26	
M132763	26	
ST335	28	
M132317	4	
M133363	24	

DAS 27 9-89

DEC 2 3 2015

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verification	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

D3672-3 Manufactured No 110 Each 1,119.000 32 32
D3672-3
Washer, Phenolic

DAS 6 9-89 DAS 28 9-89

Location	Loc Qty	Loc Code
FG	100	
133083	52	
134449	48	
FP001	763	
132639	263	
137234	500	
ST049	241	
135831	241	
ST055	15	
129916	15	

DAS 27 9-89

NAS1149C0432R Purchased No 110 Each 872.0000 32 32
NAS1149C0432R
WASHER

DAS 6 9-89 DAS 28 9-89

Location	Loc Qty	Loc Code
GA	857	
m125807	428	
m131467	429	
ST271	15	
m131467	15	

133577

DAS 27 9-89

D3672-9 Manufactured No 110 Each 839.0000 8 8
D3672-9
Washer

DEC 2 3 2015 DAS 28 9-89 DAS 6 9-89

Location	Loc Qty	Loc Code
ST049	309	
114963	309	
t064a	530	
133084	530	

DAS 27 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
Description Work Order Deviation		**Disposition**	**Completed By**
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verfication	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

NAS1149C0632R	Purchased	No	110	Each	131.0000	8	8	DAS 6 9-89
NAS1149C0632R						**		DAS 28 9-89
WASHER								

DAS 27 9-89

Location	Loc Qty	Loc Code
ST271	131	
M128812	31	
M133363	100	

D3672-11	Manufactured	No	110	Each	654.0000	8	8	DAS 28 9-89
D3672-11						**		DAS 6 9-89
Washer								

Location	Loc Qty	Loc Code
FG	10	
77483	10	
ST049	134	
121544	134	
ST064A	510	
133082	510	

DAS 27 9-89

DEC 23 2015

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

MS21043-4 *MS21043-4* Nut	Purchased	No	110	Each	934.0000	29 **	29

Location		Loc Qty	Loc Code
CCK004		300	
	m133316	300	
CCK007		300	
	m132803	300	
FG		40	
	104603	40	
GA		101	
	m128798	101	
ST304		193	
	m128818	39	
	m131697	9	
	m132382	4	
	m133134	141	

DAS 27 9-89

DAS 6 9-89 DAS 28 9-89

D3403-3 *D3403-3* Bushing	Manufactured	No	110	Each	26.0000	8 **	8

Location		Loc Qty	Loc Code
ST034		18	
	134967	18	
ST037		8	
	127939	8	

DAS 27 9-89

DAS 6 9-89 DAS 28 9-89

D3405-041 *D3405-041* Gh Lug	Manufactured	No	110	Each	7.0000	1 **	1 137181 DEC 23 2015

Location		Loc Qty	Loc Code
st529		7	
	119182	7	

DAS 27 9-89

DAS 6 9-89 DAS 28 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :

Step #:

QTY Effective :

MRB (QSI042) Approval

Description Work Order Deviation	**Disposition**

Completed By

Lead hand / Supervisor Approval Verification

QC / QA Coordinator Approval

Root Cause

Environment	☐	No Re-verfication	☐
Design	☐	Operator	☐
Doc/Data	☐	Offset/Setup	☐
Equip/Tooling	☐	Supplier	☐
Handling/Pre	☐	Training	☐
Material	☐	Use for Testing	☐
Internal Transport	☐	Poor Information	☐
Tribal Knowledge	☐	Rushing	☐
LOA	☐	Product Improvement	☐
Substation	☐	Process Improvement	☐
Past Expiry Date	☐	Manufacturing Process	
Misidentified	☐	Past Due	☐

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*

Parent Item: D412-742-013 *D412-742-013*

Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015

Start Qty: 1.00 **Required Qty:** 1.00

D3405-043 *D3405-043* Gh Lug

Manufactured No 110 Each 11.0000 1 1 ** 137180

DAS 27 9-89

DAS 6 9-89 DAS 28 9-89

Location		Loc Qty	Loc Code
st529		3	
	135468	3	
ST531		8	
	119183	8	

AN4C7A *AN4C7A* BOLT

Purchased No 110 Each 56.0000 4 4 **

DAS 27 9-89

DEC 2 3 2015 DAS 28 9-89 DAS 6 9-89

Location		Loc Qty	Loc Code
ST340		20	
	m133363	20	
ST345		36	
	m127363	36	

D3407-041 *D3407-041* Tow Ring

Manufactured No 110 Each 4.0000 1 1 ** 138196

DAS 27 9-89

DAS 6 9-89 DAS 28 9-89

Location		Loc Qty	Loc Code
st530		4	
	134755	4	

D3417-3 *D3417-3* Washer

Manufactured No 110 Each 25.0000 2 2 **

DAS 27 9-89

DEC 2 3 2015 DAS 6 9-89 DAS 28 9-89

Location		Loc Qty	Loc Code
FG		7	
	33519	7	
ST035		18	
	128432	18	

2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
Description Work Order Deviation		**Disposition**	Completed By
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verfication	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

D3456-1 Manufactured No 110 Each 133.0000 1 1
D3456-1
Washer

Location	Loc Qty	Loc Code
FG	7	
25701	7	
ST038	23	
129861	6	
134407	17	
ST038A	100	
135949	50	
136922	50	
ST051A	3	
128456	3	

DAS 27 9-89
DAS 6 9-89
DAS 28 9-89

AN3C37A Purchased No 110 Each 452.0000 1 1
AN3C37A
BOLT

Location	Loc Qty	Loc Code
ST338a	452	
131651	70	
M128773	1	
M129650	55	
M131367	70	
M131856	70	
M132169	70	
M132381	70	
M132522	46	

DAS 27 9-89
DEC 2 3 2015
DAS 6 9-89
DAS 28 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
Description Work Order Deviation		**Disposition**	**Completed By**
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

AN3C40A *AN3C40A* Bolt	Purchased	No		110	Each	14.0000	1 **	1

DAS 27 9-89

DAS 6 9-89

DAS 28 9-89

Location	Loc Qty	Loc Code
FG	5	
11442	5	
ST347	9	
m132717	9	

AN3C41A *AN3C41A* Bolt	Purchased	No		110	Each	360.0000	1 **	1

DAS 27 9-89

DEC 23 2015

DAS 6 9-89

DAS 28 9-89

Location	Loc Qty	Loc Code
FG	10	
122843	5	
124975	1	
m130081	4	
ST338a	273	
131651	75	
m131367	48	
~~m132169~~	75	
m132522	75	
ST347	77	
m131856	2	
m132381	75	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

AN3C42A	Purchased	No	110	Each	76.0000	1	1

AN3C42A
Bolt

Location	Loc Qty	Loc Code
FG	5	
121103	5	
ST338a	61	
m130485	3	
m131856	10	
m132381	8	
m132522	10	
m132674	10	
m133091	10	
m133336	10	
ST346	10	
m131854	2	
m131855	8	

DAS 27 9-89

DAS 6 9-89

DAS 28 9-89

AN3C43A	Purchased	No	110	Each	38.0000	4	4

AN3C43A
Bolt

Location	Loc Qty	Loc Code
FG	10	
120465	10	
ST338a	25	
m133363	25	
ST346	3	
m132767	3	

DAS 27 9-89

1330111X3

DAS 6 9-89

DAS 28 9-89

DEC 2 3 2015

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval

Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause

Environment	☐	☐	No Re-verfication
Design	☐	☐	Operator
Doc/Data	☐	☐	Offset/Setup
Equip/Tooling	☐	☐	Supplier
Handling/Pre	☐	☐	Training
Material	☐	☐	Use for Testing
Internal Transport	☐	☐	Poor Information
Tribal Knowledge	☐	☐	Rushing
LOA	☐	☐	Product Improvement
Substation	☐	☐	Process Improvement
Past Expiry Date	☐	☐	Manufacturing Process
Misidentified	☐	☐	Past Due

FAULT CATEGORY

☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

AN3C46A	Purchased	No		110	Each	221.0000	5	5

AN3C46A
Bolt

Location	Loc Qty	Loc Code
FG	10	
122843	10	
ST338a	141	
M132169	70	
M133090	1	
M133332	70	
ST346	70	
131651	3	
M132522	34	
M133090	33	

DAS 6 9-89

DAS 27 9-89

DAS 28 9-89

NAS1149C0332R	Purchased	No		110	Each	4,590.000	26	26

NAS1149C0332R
WASHER

Location	Loc Qty	Loc Code
FP001	1004	
m132930	1004	
FP01	977	
m133284	977	
GA	435	
m133284	435	
ST271	2174	
m133284	2174	

DAS 6 9-89

DEC 2 3 2015

DAS 27 9-89

DAS 28 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
Description Work Order Deviation		**Disposition**	Completed By
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verfication	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID: 138173 *138173*
Parent Item: D412-742-013 *D412-742-013*
Parent Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible

Start Date: 10/19/2015 **Required Date:** 10/29/2015
Start Qty: 1.00 **Required Qty:** 1.00

MS21043-3	Purchased	No	110	Each	641.0000	13	13

MS21043-3
Nut

Location		Loc Qty	Loc Code
FG		80	
	103691	80	
FP001		11	
	m130673	11	
GA		139	
	m130673	15	
	m131677	124	
ST304		374	
	m131340	160	
	m133031	214	13
ST308		37	
	m132551	37	

DAS 27 9-89

DAS DEC 23 2015 6 9-89

DAS 28 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No.

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
Description Work Order Deviation		**Disposition**	Completed By
			Lead hand / Supervisor Approval Verification
			QC / QA Coordinator Approval

Root Cause

Environment ☐	☐	No Re-verfication	
Design ☐	☐	Operator	
Doc/Data ☐	☐	Offset/Setup	
Equip/Tooling ☐	☐	Supplier	
Handling/Pre ☐	☐	Training	
Material ☐	☐	Use for Testing	
Internal Transport ☐	☐	Poor Information	
Tribal Knowledge ☐	☐	Rushing	
LOA ☐	☐	Product Improvement	
Substation ☐	☐	Process Improvement	
Past Expiry Date ☐	☐	Manufacturing Process	
Misidentified ☐	☐	Past Due	

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :

Work Order ID 138173

Tuesday, October 27, 2015 11:05:10 AM

138173

Item ID: D412-742-013 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Skidtube Fits LH or RH High Gear, DART (Apical) Tri-Bag Float Compatible **Stop** *NS2*

Start Date: 10/19/2015 **Start Qty:** 1.00 *1*

Required Date: 10/29/2015 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** MLS **Date:** OCT 2 7 2015 **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Draw Nbr	Revision Nbr
IIN D412-742	E

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	**Memo**	0.00					MLS	JAN 0 5 2016	
Doc.Control -USB or Paperwork	Photocopy bluefile and create labels per PPP D412-742-013		CHG00						
110	Pick Kit	0.00							
110									
Packaging	**Memo**	0.00						DEC 23 2015	
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	**Memo**	0.00							
Quality Control									

per ECN 16-504 MF 16-1-13

Change Record

Part Number: D412-742-013

Description: FLOAT SKIDTUBE

CHG #	DATE	BY	RELEVANT DOCUMENTS	ECN #
001	05.08.23	KJ	DR-D412-742 REV A	
002	07.01.31	KJ	DSI 9364 REV A, MDL-D412-742 REV H	
003	07.04.17	KJ	D3391 REV F, MDL-D412-742 REV H	
004	07.10.30	KJ	D3391 REV G, D3670 REV A, D3672 REV B, DR-D412-742 REV H,	
			MDL-D412-742 REV J	
005	08.08.18	KJ	DSI 9364 REV C	08-510
006	09.01.22	KJ	DSI 9441 REV A	09-505
007	12.01.12	KJ	IIN-D412-742 REV E, ICA-D412-742 REV 4	12-506
008	16.01.11	KJ	D4095 REV C	16-504

(CONTINUED FROM PAGE 19)

Item	Qty -013	Qty -043	Part Number	Description
40	1		D2571	SADDLE, FWD OUTSIDE
41	1		D2572	SADDLE, FWD INSIDE
42	1		D2573	SADDLE, AFT OUTSIDE
43	1		D2574	SADDLE, AFT INSIDE
44	2		D2876	SADDLE SPACER
45	2		D2877	SADDLE SPACER
46A	8		D3403-1	BUSHING
46B	8		D3403-5	BUSHING
47A	4		D2747	SET SCREW
47B	2		D3533-1	SET SCREW
48	16		AN4C6A	BOLT
49A	4		AN4C52A	BOLT
49B	4		AN4C53A	BOLT
50	8		AN6C12A	BOLT
51A	32		D3672-3	WASHER (REPLACES NAS1515H4L)
51B	32		AN960C416L	WASHER
52A	8		D3672-9	WASHER (REPLACES NAS1515H6L)
52B	8		AN960C616L	WASHER
53	8		D3672-11	WASHER (REPLACES NAS1515H7L)
54	24		MS21043-4	NUT
55	4		AN4C7A	BOLT
56	2		D3591-1	BUSHING
60	8		D3403-3	BUSHING
61	1		D3405-041	GHW LUG
62	1		D3405-043	GHW LUG
63	4		AN4C47A	BOLT
64	4		MS21043-4	NUT
70	1		D3407-041	TOW RING
71	2		D3417-3	WASHER
72	1		MS21043-4	NUT
73	1		D3456-1	WASHER
91	1		AN3C37A	BOLT
92	1		AN3C40A	BOLT
93	1		AN3C41A	BOLT
94	1		AN3C42A	BOLT
95	4		AN3C43A	BOLT
97	5		AN3C46A	BOLT
99	26		AN960C10L	WASHER
100	13		MS21043-3	NUT

*DENOTES PART IS INCLUDED WITH D3391-043 ASSEMBLY ABOVE
**DENOTES THAT PART IS INCLUDED WITH ASSEMBLY ABOVE

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5.2 D412-742-013 (APICAL TRI-BAG) Float Skidtube Installation Parts List

Item	Qty -013	Qty -043	Part Number	Description
	X		**D412-742-013**	**FLOAT SKIDTUBE INSTALLATION**
	1	X	**D412-742-043**	**FLOAT SKIDTUBE**
		1	**D3391-043**	**412 FLOAT SKIDTUBE**
1		*24	*AN3C4A	*BOLT
3		*10	*AN3C6A	*BOLT
4		*4	*AN3C7A	*BOLT
5		*38	*AN960C10L	*WASHER
21		*1	*D4095-041	*WEARSHOE (REPLACES D3564-1)
22		*1	*D4095-043	*WEARSHOE (REPLACES D3564-3)
23		*1	*D4095-045	*WEARSHOE (REPLACES D3564-5)
10		***1**	***D3391-021**	***412 FORWARD TUBE**
11		**1	**D3401-041	**TOW CAP
12A		**10	**AELS-1032-225	**INSERT (REPLACES NAS1330S3KB166)
13		**10	**AN3C4A	**BOLT
14A		**4	**D3672-1	**WASHER (REPLACES NAS1515H3L)
14B		**10	**AN960C10L	**WASHER
24		**1	**D4095-051	**WEARSHOE (REPLACES D3564-13)
20		***1**	***D3391-023**	***412 MID TUBE**
28		**20	**AELS-1032-130	**INSERT (REPLACES NAS1330S3KB116)
30		***1**	***D3391-025**	***412 AFT TUBE**
25		**1	*D4095-049	**WEARPAD (REPLACES D3537-1)
26		**1	*D4095-047	**WEARPAD (REPLACES D3537-7)
31		**1	**D2646	**AFT CAP
32		**14	**AELS-1032-130	**INSERT
36		**8	**AELS-1032-225	**INSERT (REPLACES NAS1330S3KB366)
37A		**6	**AN3C4A	**BOLT
37B		**4	**AN3C5A	**BOLT
38A		**2	**D3672-1	**WASHER (REPLACES NAS1515H3L)
38B		**10	**AN960C10L	**WASHER

(CONTINUED ON PAGE 20)

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